

IN THE CLAIMS:

Please amend the claims in the above-identified patent application as follows wherein deleted material is marked with a ~~strike through~~ and new material is underlined to show the changes made:

1 13. **(Currently amended)** A method for facilitating high signal
2 throughput of an improved CMOS image sensor comprising a plurality of photo sensors
3 configured in a two-dimensional area, ~~;~~ said method comprising:
4 reading out charge signals from said plurality of photo sensors row by row in
5 parallel to respective column buses coupled to a double sampling circuit and a
6 programmable gain amplifier;
7 conditioning said charge signals in said programmable gain amplifier in
8 accordance with said double sampling circuit before said charge signals are
9 digitized to produce pixel signals; and
1 0 processing said pixel signals in a pixel processor to produce a desired result.

1 14. **(Original)** The method as recited in claim 13 wherein said pixel
2 processor, said double sampling circuit and said programmable gain amplifier are
3 monolithically integrated with said plurality of photo sensors of the CMOS image sensor.

1 15. **(Currently amended)** The method as recited in claim 13 wherein
2 said conditioning said charge signals comprises:
3 deriving a measurement difference of each of said charge signals with a reference
4 in said double sampling circuit; and
5 adjusting ~~said~~ each of said charge signals with respect to said measurement
6 difference with said programmable gain amplifier.

1 16. **(Original)** The method as recited in claim 13 wherein said desired
2 result is a compressed format of said pixel signals and wherein said processing said pixel
3 signals in a pixel processor comprises compressing said pixel signals according to a
4 commonly used compression standard.

1 17. **(Currently amended)** The method as recited in claim 16 wherein
2 the commonly used compression standard is selected from a group consisting of GIF
3 (Graphic Interchange Format) ~~(GIF)~~, JPEG (Joint Photographic Experts Group) and
4 MPEG (Motion Picture Experts Group) supported by a World Wide Web protocol.

1 18. **(Original)** The method as recited in claim 13 wherein said desired
2 result is a gray-scale intensity image and wherein said processing said pixel signals in a
3 pixel processor comprises converting said pixel signals respectively to intensity data
4 according to a predefined conversion standard.

1 19. **(Currently amended)** An architecture for facilitating high signal
2 throughput of an improved CMOS image sensor comprising a plurality of photo sensors
3 configured in a two-dimensional area, ; said architecture comprising:
4 a pair of column address and row address decoders providing address signals to
5 address each of the plurality of photo sensors;
6 a number of signal conditioning circuits, said signal conditioning circuits
7 comprising a correlated double sampling circuit and a programmable gain
8 amplifier, said signal conditioning circuits each coupled to a column data bus
9 for receiving charge signals read out ~~readout~~ from said photo sensors when
1 0 said photo sensors are addressed by said address signals;
1 1 a number of analog-to-digital converters, each respectively coupled to one of said
1 2 conditioning circuits and digitizing said charge signals in parallel; to produce
1 3 pixel signals; and
1 4 a pixel processor for receiving said pixel signals from said analog-to-digital
1 5 converters, wherein said pixel signals are processed to produce a desired
1 6 result.

1 20. **(Cancelled)** The architecture as recited in claim 19 wherein each
2 of the signal conditioning circuits comprises a correlated double sampling circuit and a
3 programmer gain amplifier.

1 21. **(Currently amended)** The architecture as recited in claim 19 20
2 wherein said correlated double sampling circuit derives a measurement difference of each
3 of said charge signals with a reference.

1 22. **(Currently amended)** The architecture as recited in claim 21
2 wherein said ~~programmer~~ programmable gain amplifier receives said measurement
3 difference and adjusts each of said charge signals with respect to said measurement
4 difference.

1 23. **(Original)** The architecture as recited in claim 21 wherein each of the
2 signal conditioning circuits produces a signal that indicates an optimum exposure time.

1 24. **(Currently amended)** The architecture as recited in claim 23
2 wherein said correlated double sampling circuit and said ~~programmer~~ programmable gain
3 amplifier together derives a measurement difference of each of said charge signals with a
4 reference; and calculates said optimum exposure time from measurement difference.

1 25. **(Currently amended)** The architecture as recited in claim 19 20
2 further comprises a memory storing instructions, \div said memory coupled to said pixel
3 processor that executes said instructions from said memory to achieve said desired result.

1 26. (**Currently amended**) The architecture as recited in claim 25
2 wherein said instructions cause said~~causes~~ pixel processor to compress said pixel signals
3 according to a commonly used compression standard.

1 27. (**Currently amended**) The architecture as recited in claim 26
2 wherein the commonly used compression standard is selected from a group consisting of
3 GIF (Graphic Interchange Format) (~~GIF~~), JPEG (Joint Photographic Experts Group) and
4 MPEG (Motion Picture Experts Group) supported by a World Wide Web protocol.

1 28. (**Currently amended**) The architecture as recited in claim 25
2 wherein said instructions cause said~~causes~~ pixel processor to convert said pixel signals
3 respectively to intensity data according to a predefined conversion standard.

1 29. (**Currently amended**) The architecture as recited in claim 19
2 wherein said pixel processor is monolithically integrated with said plurality of photo
3 sensors.

1 30. (**Currently amended**) The architecture as recited in claim 19 ~~20~~
2 wherein said pixel processor, said correlated double sampling circuit and said
3 ~~programmer~~ programmable gain amplifier are ~~is~~ monolithically integrated with said
4 plurality of photo sensors.